

a bias generation circuit for outputting an average value of the wobble envelope voltage as a bias voltage;

an arithmetic unit for calculating a positive square root of the wobble envelope voltage with respect to the bias voltage assumed as being "1", and outputting a reciprocal of the calculated positive square root as a calculation result; and

recording power control means for controlling recording power when the optical means records the information in the optical disk, based on the calculation result.

30<sup>2</sup> (New) An optical disk apparatus according to claim <sup>29</sup>1, wherein:  
the optical disk apparatus is capable of recording data in a guiding groove portion and an inter-guiding groove portion of the optical disk;

the optical disk apparatus further comprises identification means for identifying whether a track scanned by the optical means is in the guiding groove portion or the inter-guiding groove portion; and

the bias generation circuit generates two types of bias voltages, a bias voltage for recording in the guiding groove portion and a bias voltage for recording in the inter-guiding groove portion, based on an identification result by the identification means.

31<sup>3</sup> (New) An optical disk apparatus according to claim <sup>30</sup>1, wherein the arithmetic unit calculates a positive square root of the wobble envelope voltage with respect to the bias voltage assumed as being "1", and provides a value obtained by adding "1" to a result of subtraction of the positive square root from "1" as a calculation result.

#### REMARKS

Applicant respectfully requests that the Examiner consider the foregoing claims contained in this amendment. If the examiner has any questions or comments regarding this

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Preliminary Amendment or the present application, then he or she is invited to telephone the undersigned attorney.

Respectfully submitted,

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